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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/633,061	08/04/2000	Hong Joo Kim	8737.20016	1409

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EXAMINER
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NGUYEN, HAU H

ART UNIT	PAPER NUMBER
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2676

DATE MAILED: 03/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/633,061

Applicant(s)

KIM, HONG JOO

Examiner

Hau H Nguyen

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 2-4 and 8-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5-7 and 11-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

*Response to Arguments*

1. Applicant's arguments filed January 13, 2004 have been fully considered but they are not persuasive. In response to Applicant's arguments that the cited prior art does not teach all the limitations of the claimed invention, the examiner disagrees. First of all, the examiner does not rely solely on any single reference but combination of reference please note that the examiner does not rely solely on any single reference, but the combination of teachings from reference Higginbotham et al. (U.S. Patent No. 5,896,575) and Koizumi et al. (US 6,177,917). In response to Applicant's argument that reference Koizumi does not teach the first display means and the second display means, the examiner refers to Fig. 4, the display device as taught by Koizumi does have two display portions (a first display means and a second display means). It can be inferred from Fig. 4 that the memory 31, operation circuit 32, function generating circuit 33, driving voltage circuit 14, first and second distortion correction circuits 23 and 25, first and second signal electrode driving circuits 13 and 15, first and second scanning electrode driving circuit 21 and 22, together is the operator for operating the first and second liquid crystal displays 11 and 12, having a plurality of scan electrode lines connected to the first and second scan electrodes (Y1, Y2,..., Y10, and y1, y2,..., y10, respectively), and a plurality of signal electrode lines connected to the first signal electrodes and the second signal electrodes (X1, X2,..., X10, and x1, x2,..., x10, respectively). The positions of the first display portions 11 and the second display portion 12 is complemented by the teachings of reference Higginbotham, which comprises a folder movable to an open position and a close position as cited in the previous Office Action.

Art Unit: 2676

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5, 7, 11, 13-14, 18-21, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higginbotham et al. (U.S. Patent No. 5,896,575) in view of Koizumi et al. (US 6,177,917).

Referring to claims 1, 5, 7, 11, 13-14, 19-21, and 26, as shown in Figs. 1 and 2, Higginbotham et al. teach a portable radio messaging device 100 having its display 114 in a first (closed) position. The device 100 comprises a display portion 102 and a base portion 104. The display portion 102 and the base portion 104 are rotatably coupled at a common edge by a hinge 106. The display further comprises a first side 116 (first display means) and a second side 118 (second display means) (FIG. 2) facing in opposite directions. Both sides 116, 118 are usable for viewing information displayed on the display 114 (col. 2, lines 15-25). As shown in Fig. 6, Higginbotham et al. teach when the display portion 102 is in the first (closed) position, the permanent magnet 602 is proximate the magnetic reed switch 604, and the magnetic reed switch 604 assumes an operative state which indicates to the processing system 806 that the display portion 102 is in the first (closed) position (col. 3, line 67, and col. 4, lines 1-5). As shown in Fig. 7, Higginbotham et al. teach the display portion 102 is in the second (open) position, the permanent magnet 602 is remote from the magnetic reed switch 604, and the magnetic reed switch 604 assumes state which indicates to the processing system 806 that the display portion

Art Unit: 2676

102 is in the second (open) position. With reference to Fig. 8, Higginbotham et al. also teach the microprocessor 808 and the display position detector 606 cooperate to flip the displayed image in order to maintain a correct orientation of the image, in response to the display portion 102 being moved from the first (closed) position to the second (open) position (col. 4, lines 36-40).

Higginbotham et al. further teach the display 500 (Fig. 5) can be a liquid crystal display device (col. 3, lines 52-54).

Thus, Higginbotham et al. teach all the limitations of claims 1, 5, 7, 11, 13-14, 19-21, and 26, except for an operator for operating the first and second display means.

However, Koizumi et al. teach a method of driving a first liquid crystal display (LCD) portion 11, driven by a first signal electrode driving circuit 13 having X1, X2,..., X10 signal electrode lines and a first scan electrode driving circuit 21 having Y1, Y2,..., Y5 scan electrode lines; and second LCD portion 12 driven by second signal electrode driving circuit 15 having X1, X2,..., X10 signal electrode lines, and a second scan electrode driving circuit 22 having y1, y2,..., y5 scan electrode lines. An operation circuit 32 controls a first signal electrode driving circuit 13 and a second electrode driving circuit 15; a function generating circuit 33 controls a first scanning electrode driving circuit 21 and a second scanning electrode driving circuit 22. Koizumi et al. also disclose an operation circuit 32 controls a first signal electrode driving circuit 13 and a second electrode driving circuit 15; a function generating circuit 33 controls a first scanning electrode driving circuit 21 and a second scanning electrode driving circuit 22 (see Figure 4, and col. 10, lines 35-52).

Therefore, it would have been obvious to one skilled in the art to utilize the method of driving liquid crystal display as taught by Koizumi et al. in combination with the teachings of

Art Unit: 2676

Higginbotham et al. in order to obtain the advantages of (1) providing a liquid crystal display device including a liquid crystal panel divided into a plurality of display portions; and (2) providing a method for driving the same capable of sufficiently suppressing crosstalk even when the display on the plurality of display portions is realized on a display portion by display portion basis (col. 6, lines 63-67, and col. 7, lines 1- 2).

Referring to claims 18 and 25, although Higginbotham et al. and Koizumi et al. do not teach using flexible wire connecting the signal electrode lines and the scan electrode lines, since the signal electrode lines and scan electrode lines are used in a movable device such as cellular phones, it would have been obvious to one skilled in the art to utilize flexible wires to connect the signal electrode lines and the scanning electrode lines so that the lines would not be broken in movable embodiments.

4. Claims 6, 12, 15-17, 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higginbotham et al. (U.S. Patent No. 5,896,575) in view of Koizumi et al. (US 6,177,917) and further in view of Jahagirdar et al. (U.S. Patent No. 6,304,763).

Referring to claims 15-17, 22-24, as cited above Higginbotham et al. and Koizumi et al. teach all the limitations of claims 15-17 and 22-24 except for a common light plate for illuminating the first and the second display.

However, Jahagirdar et al. teach a mobile device as shown in Fig. 1, comprising a first display 130 and a second display 132, and a controller 504 (Fig. 5) for generating display data to be displayed at display areas 130 and 132 by selecting one of drivers 514 and 518 to receive display data. Controller 504 controls power to backlight 522 (col. 4, lines 34-46). With reference to Figs. 8A and 8B, controller 504 controls the operation of the mobile device from an open

Art Unit: 2676

position to closed position (block 800) (Fig. 8A), and from a closed position to open position (block 832-834). Jahagirdar et al. further teach the backlight 522 is preferably designed and positioned such that backlighting is provided for both of display elements 516 and 520 (Fig. 5, and col. 4, lines 61-65).

Therefore, it would have been obvious to one skilled in the art to utilize the teachings of backlight for LCD display as taught by Jahagirdar et al. in combination with the method as taught by Higginbotham et al. and Koizumi et al. in order to reduce power consumption (col. 1, lines 35-38).

In regard to claims 6 and 12, although Higginbotham et al. and Koizumi et al. does not teach enabling one display while disabling another display of first and second display means, as cited above, with reference to Figs. 8A and 8B, Jahagardar et al. teach disabling one display when another display is in operation as shown in block 806 (Fig. 8A) and block 838 (Fig. 8B).

Therefore, it would have been obvious to one skilled in the art to utilize the teachings of backlight for LCD display as taught by Jahagirdar et al. in combination with the method as taught by Higginbotham et al. and Koizumi et al. in order to reduce power consumption (col. 1, lines 35-38).

### *Conclusion*

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

Art Unit: 2676

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hau H. Nguyen whose telephone number is: 703-305-4104. The examiner can normally be reached on MON-FRI from 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 703-308-6829.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D. C. 20231

or faxed to:

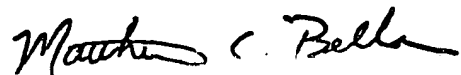
(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

H. Nguyen

03/11/2004



MATTHEW C. BELLA  
SUPERVISORY PATENT EXAMINER  
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